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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,749	11/13/2003	Budong You	09464-025001	1619
26181	7590	03/27/2006	EXAMINER	
FISH & RICHARDSON P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022			LE, DUNG ANH	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/713,749

Applicant(s)

YOU ET AL.

Examiner

DUNG A. LE

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Detailed Action.

**Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.**

**Claim Rejections**

***Claim Rejections - 35 USC § 112***

Claims 19-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 19**, a limitation “a high energy implant” is not clear as what the energy implant is consider high energy implant.

**Claim 20**, a limitation “a large angle tilt implant” is not clear as what the angle tilt implant is consider a large angle tilt implant.

***Claim Rejections - 35 USC § 102***

**Claims 17 and 19 are rejected under 35 USC 102 (e) as being anticipated by Shibib et al. (6,927,453 B2).**

**Regarding claim 17**, Shibib et al. teaches a method of fabricating an LDMOS transistor (Figs. 3-6 and related texts), the method comprising:

implanting, into a source region of the LDMOS transistor, a P-body 320; forming a gate oxide 308 for the LDMOS transistor, the gate oxide 308 for the LDMOS

transistor being formed after implantation of the P-body 320 of the LDMOS transistor; and implanting, into the source region of the LDMOS transistor, an n<sup>+</sup> region 312 to provide an ohmic contact, n<sup>+</sup> region 312 being located within the P body.

**Regarding claim 19**, Shibib et al. teaches the claimed invention as applied to claim 17 including the deep implant step to form P-body (it is inherently a high energy implant).

#### **Claim Rejections - 35 USC § 103**

**The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 18 and 20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Shibib et al. in view of the following remark:**

**Regarding claim 18**, Shibib et al. teaches the claimed invention as applied to claim 17 including implant step to form P-body (col 9, lines 1-5) except for implanting the P-body includes implanting the P-body using a first implant and a second implant as cited in current claim.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implant the P-body using a first implant and a second implant, since it has been held that mere duplication of the essential step of a device involves only routine skill in the art.

**Regarding claim 20**, Shibib et al. teaches the claimed invention as applied to claim 17 including a deep implant step to form P-body 320 (col 9, lines 1-5) except for the first implant is a large angle tilt implant as cited in current claim.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the P-body by using a large angle implant because it is commonly used to improve desirable or prevent detrimental reactions in the designated region, since it has been held to be within the general skill of a worker in the art to select a known process on the basis of its suitability for the desired application.

#### **Reasons for Indication of Allowable Subject Matter**

**Claims 1-16 would be allowed.** The following is a statement of reason for the indication of allowable subject matter:

Claims 1- 16 are considered allowable since the prior made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations.

Beasom (2004/0180485 A1), Shibib et al. (6,927,453 B2) and Background of Invention and other prior art in the record, taken individually or in combination, do not teach the claimed invention having the steps of implanting, into the drain region of the transistor, a fifth impurity region with a fifth volume and a fifth surface area, the fifth impurity region being of the first type.

Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

#### **Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung A. Le whose telephone number is (571) 272-1784. The examiner can normally be reached on Monday-Tuesday and Thursday 6:00am- 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUNG A. LE   
Primary Examiner  
Art Unit 2818